

ABSTRACT

An inkjet printhead with nozzles 4 and liquid passages 31, 32 leading to each nozzle. The nozzles, ejection actuators 14, associated drive circuitry 22 and liquid passage 31, 32 being formed on and through a wafer 21 using lithographically masked etching technique, such that the wafer has a droplet ejection side and a liquid supply side. Each of the liquid passages is formed by etching a hole 31 partially through the wafer 21 from the droplet ejection side, and etching a passage from the liquid supply side of the wafer 21 to the hole 31. Etching a hole 31 into the wafer 21 from the droplet ejection side means the
10 ink supply passage 32 can stop short of the interface between the dielectric 23 and the wafer 21 to prevent the etchant from tracking sideways and damaging the drive circuitry 22. As the inlet hole 31 is relatively shallow, the removal of the resist is not overly difficult. However, setting the depth of the supply passage etch so that it overlaps the blind end of the hole by more than the combined tolerances of both etching processes ensures an adequate fluid connection to the nozzle. This permits a more compact overall design and higher nozzle packing density.

Fig. 5